WHAT IS CLAIMED IS:

1. An information output apparatus comprising:

a display panel for displaying an image;

an unevenness output element group which is arranged to be in contact with a surface of said display panel, and displays an unevenness level of the image;

a memory for storing unevenness information of the image; and

a control unit for controlling the unevenness level of the image by controlling voltage values to be applied to said unevenness output elements within a region of the image displayed on said display panel on the basis of the unevenness information of the image stored in said memory.

2. An information output apparatus comprising:

a first display panel for displaying a plurality of images;

a second display panel for displaying an image selected from the images displayed on said first display panel;

an unevenness output element group which is arranged to be in contact with a surface of said second display panel, and displays an unevenness level of the selected image;

a memory for storing unevenness information of the imag ; and a control unit for controlling the unevenness level of the image by extracting unevenness information corresponding to the selected image from said memory, and controlling voltage values to be applied to said unevenness output elements within a region of the image displayed on said second display panel on the basis of the extracted unevenness information.

3. An information output apparatus comprising:

a display panel for displaying an image;

a generation unit for extracting a plurality of image objects included in the image displayed on said display panel, identifying a perspective relationship among the extracted image objects, and generating unevenness information of each image object on the basis of the identified perspective relationship;

an unevenness output element group which is arranged to be in contact with a surface of said display panel, and displays an unevenness level of the image; and

a control unit for controlling the unevenness level of the image by controlling voltage values to be applied to said unevenness output elements within a region of the image displayed on said panel on the basis of the unevenness information generated by said generation unit.

4. The apparatus according to claim 1, wherein said unevenness output element group deforms to a convex

shape with respect to the surface of said display panel by different deformation amounts in correspondence with the voltage values applied by said control unit.

5. The apparatus according to claim 2, wherein said unevenness output element group deforms to a convex shape with respect to the surface of said second display panel by different deformation amounts in correspondence with the voltage values applied by said control unit.

6. The apparatus according to claim 3, wherein said unevenness output element group deforms to a convex shape with respect to the surface of said display panel by different deformation amounts in correspondence with the voltage values applied by said control unit.

7. The apparatus according to claim 1, wherein said display panel is arranged on an upper surface of said unevenness output element group, an image displayed on said display panel can be directly identified, and said display panel deforms in correspondence with deformation of said unevenness output element group.

8. The apparatus according to claim 2, wherein said second display panel is arranged on an upper surface of said unevenness output element group, an image displayed on said second display panel can be directly identified, and said second display panel deforms in correspondence with deformation of said unevenness output element group.

9. The apparatus according to claim 3, wherein said display panel is arranged on an upper surface of said unevenness output element group, an image displayed on said display panel can be directly identified, and said display panel deforms in correspondence with deformation of said unevenness output element group.

10. The apparatus according to claim 1, wherein said unevenness output element group is formed of a transparent material, and

said unevenness output element group is arranged on an upper surface of said display panel, and an image displayed on said display panel is identified via said transparent unevenness output element group.

11. The apparatus according to claim 2, wherein said unevenness output element group is formed of a transparent material, and

said unevenness output element group is arranged on an upper surface of said second display panel, and an image displayed on said second display panel is identified via said transparent unevenness output element group.

12. The apparatus according to claim 3, wherein said unevenness output element group is formed of a transparent material, and

said unevenness output element group is arranged on an upper surface of said display panel, and an image displayed on said display panel is identified via said transparent unevenness output element group.

13. A method of controlling an information output apparatus which comprises a display panel for displaying an image, an unevenness output element group which is arranged to be in contact with a surface of the display panel, and displays an unevenness level of the image, and a memory for storing unevenness information of the image, comprising:

a step of reading out the unevenness information of the image from the memory; and

a control step of controlling voltage values to be applied to the unevenness output elements within a region of the image displayed on the display panel on the basis of the readout unevenness information of the image.

14. A control program for controlling an information output apparatus which comprises a display panel for displaying an image, an unevenness output element group which is arranged to be in contact with a surface of the display panel, and displays an unevenness level of the image, and a memory for storing unevenness information of the image, comprising:

a program code of a step of reading out the unevenness information of the image from the memory; and

a program code of a control step of controlling voltage values to be applied to the unevenness output elements within a region of the image displayed on the display panel on the basis of the readout unevenness information of the image.